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Jogesh Laishram
Pandit Deen Dayal Upadhyay
Institute of Agricultural
Sciences, Bishnupur District,
Utlou, Manipur, India

Mithra Dey
Department of Ecology and
Environmental Science, Assam
University, Silchar, Assam,
India

Rocky Thokchom
Pandit Deen Dayal Upadhyay
Institute of Agricultural
Sciences, Bishnupur District,
Utlou, Manipur, India

Bioresources in rituals and cultural life of the people of five villages in and around the Loktak lake, Manipur and their conservation

Jogesh Laishram, Mithra Dey and Rocky Thokchom

Abstract

The present study was conducted in five villages (Nongmaikhong, Phoubakchao, Laphupat Tera, Karang and Ithing located in and around Loktak lake) selected purposively following purposive sampling technique. The study deals with the utilisation of bioresources in rituals and cultural life of the people living in the five villages and their conservation and conducted by interviewing 50 elderly persons (above 60 years of age) selected purposively by using pre-tested research schedule. In all 22 species of plant species and 7 species of animals were found to be conserved for 15 (for plants) and 10 (for animals) rituals or religious purposes in all the five villages by both Hindus and Muslims. Ceremonies of Meitei community like *Luhongba*, *Shraddha*, *Govardhan* puja etc. and ceremonies of Islam like Idd, *Hakikat*, Marriage ceremony, *Qurbani* etc. were some of the main rituals or religious ceremonies associated with the conservation of plants and animals. Encouraging documentation of the traditional ecological knowledge and revival of the traditional knowledge used by the local communities in conservation of plants and animals in a scientific way so as to conserve the surrounding environment and the Loktak lake for future generations is suggested.

Keywords: Loktak lake, bioresources, rituals, traditional ecological knowledge, conservation

Introduction

Manipur is a small state located in the north-eastern region of India. The state lies between 23°50' to 25°41' north latitudes and 93°2' to 94°47' east longitudes, neighboring Myanmar (Burma) in the east, Nagaland in the north, Assam in the west and Mizoram and Tripura in the south. The state has a geographical area of about 22,327 sq. km.

Loktak lake is located between 24°25' to 24°42'N and from 93°46' to 93° 55' E in the southern part of the Imphal valley of Manipur. The lake is oval in shape with maximum length and width of 26 Km and 13 Km respectively. The depth of the lake varies between 0.5 to 4.58 m with average depth recorded at 2.07 m. Loktak lake can be considered as a sub-basin of the Manipur River basin. It has a direct catchment area of 980 sq.km and indirect catchment area of 7157 sq.km. There are 55 rural and urban settlements around the lake with a total population of 100,000 (LDA and WISA, 1999) [7]. The lake is the largest freshwater lake in Northeast India. Because of its ecological status and its biodiversity values the lake has been designated as a "Wetland of International Importance" under the Ramsar Convention on 23rd March, 1990. Keibul Lamjao, the only floating national park in the world and the home of the endangered Manipur Brow Antlered Deer "Sangai"– *Cervus eldi eldi* is situated at the south-west part of the lake (Trisal and Manihar, 2004) [18]. The present study was conducted in five villages located in and around Loktak lake i.e. Nongmaikhong, Phoubakchao, Laphupat Tera, Karang and Ithing. Ithing and Karang are island villages while Phoubakchao, Laphupat Tera and Nongmaikhong are lakeshore villages. Nongmaikhong, Karang and Ithing are located in Bishnupur district while Phoubakchao and Laphupat Tera in Imphal-West district. Nongmaikhong village lies in the Southern Zone of the lake, Phoubakchao in the Northern Zone while Laphupat Tera, Karang and Ithing in the Central Zone. The livelihood of the people of these five villages depends on the resources of the Loktak lake.

Traditional Ecological Knowledge refers to the knowledge base acquired by indigenous and local peoples over many hundreds of years through direct contact and interaction with the environment. It includes an intimate and detailed knowledge of plants, animals, and natural phenomena, the development and use of appropriate technologies for hunting, fishing, trapping, agriculture, and forestry, and a holistic knowledge, or "world view" which parallels

Correspondence
Jogesh Laishram
Pandit Deen Dayal Upadhyay
Institute of Agricultural
Sciences, Bishnupur District,
Utlou, Manipur, India

the scientific discipline of ecology (Inglis, 1993) [3]. The people living in the five study villages i.e. Nongmaikhong, Phoubakchao, Laphupat Tera, Karang and Ithing have their own traditional ecological knowledge in fishing, agriculture, preservation of plants and animals in relation with religious purposes, uses of animals or its parts for medicinal purposes etc. Hence, the present study have been undertaken to assess the traditional knowledge in the utilisation of bioresources in rituals and cultural life of the people living in the five study villages.

Methodology

The present study was conducted in the five villages by interviewing with 50 respondents using a pre-tested research schedule and focus group interview. The five villages were selected purposively for the study following purposive sampling technique keeping in mind the aim and objective of the study and also the accessibility of the villages. 50 elderly persons (above 60 years of age) comprising of 10 respondents from each village were selected purposively and interviewed using a research schedule to assess their traditional knowledge regarding the utilisation of bioresources in rituals and cultural life of the people (Terer *et al.*, 2004; Nath *et al.*, 2010; McElwee, 2010) [16, 9, 8].

The research schedule used in study sought to obtain information regarding traditional ecological knowledge used in the utilisation of bioresources in rituals and cultural life of the people. It was prepared referring Jamir and Lal, 2005;

Tynsong and Tiwari, 2008; Karthikeyan *et al.*, 2009; Panda and Misra, 2011 [4, 19, 6, 10] and in consultation with other relevant literatures. Focus group interviews with knowledgeable persons of the villages were then conducted and the information collected was verified with the published literatures (Singh and Singh, 1994; Trisal and Manihar, 2004) [13, 18].

The local names and specimen of the bioresources used by the respondents was collected and cross checked with the published literatures (Sinha, 1996; Singh *et al.*, 2000; Vishwanath, 2002; Jayaram, 2010; Vishwanath *et al.*, 2014) [15, 14, 20, 5, 21] and identified with the help of experts of Loktak Development Authority (LDA), Manipur. For the correct nomenclature of plant species International Plant Name Index (IPNI) (<http://www.ipni.org>) and Plant List (<http://www.theplantlist.org>) websites were browsed. For the correct nomenclature of fish species website such as <http://www.fishbase.org> were also browsed.

Results

Conservation of plants for rituals or religious purposes is shown in Table 1. In all 22 types of plant species were found to be conserved for 15 rituals or religious purposes in all the five villages by Hindus. *Luhongba* (marriage ceremony of Meitei community), *Shraddha* (death ceremony of Meitei community) and *Umang laiharaoba* (merry making of forest deity celebrated by Meitei community) were the rituals where conservation of plants mostly took place.

Table 1: Plants conserved for rituals

Scientific name	Local name	Name of the rituals
1) <i>Ocimum tenuiflorum</i> L.	Tulsi	<i>Luhongba</i> (marriage ceremony of Meitei community), <i>Shraddha</i> (death ceremony of Meitei community), any kind of Puja (a prayer ritual performed by Hindus to host, honour and worship one or more deities, or to spiritually celebrate an event)
2) <i>Toona ciliata</i> M. Roem.	Tairen	<i>Umang laiharaoba</i> (merry making of forest deity celebrated by Meitei community)
3) <i>Eupatorium cannabinum</i> L.	Langthrei	<i>Umang laiharaoba</i>
4) <i>Citrus latipes</i> (Swingle) Yu.Tanaka	Heiribop	<i>Durga puja</i>
5) <i>Pinus kesiya</i> Royle ex Gordon	Uchan	<i>Shraddha</i> ceremony, Pujas to chase out evil spirits by Meitei community.
6) <i>Mirabilis jalapa</i> L.	Mukaklei	<i>Thou toub</i> a (a traditional ceremony for appeasing Gods performed by Meitei community), <i>Luhongba</i> , <i>Ushop</i> (traditional feast of Meitei community)
7) <i>Tagetes erecta</i> L.	Sanarei	<i>Govardhan puja</i> , <i>Diwali</i> festival (the festival of light celebrated by Hindus)
8) <i>Rosa × damascena</i> Herrm.	Atar gulab	<i>Luhongba</i> , <i>Asthi</i> (a ceremony performed on the sixth day of death by Meitei community)
9) <i>Phyllanthus emblica</i> L.	Heikru	<i>Luhongba</i>
10) <i>Magnolia champaca</i> (L.) Baill. ex Pierre	Leihao	<i>Luhongba</i>
11) <i>Meyna laxiflora</i> Robyns	Heibi	<i>Hingchabi changba</i> (possessing of a person by evil spirits according to Meitei community)
12) <i>Eleusine indica</i> (L.) Gaertn.	Phungpai	<i>Laiharaoaba</i> (merry making of deities of Meitei community)
13) <i>Mangifera indica</i> L.	Heinou	<i>Luhongba</i>
14) <i>Jasminum multiflorum</i> (Burm.f.) Andrews	Kundo	<i>Luhongba</i>
15) <i>Musa x paradisiaca</i> L.	Laphoi	<i>Shraddha</i> and <i>Luhongba</i>
16) <i>Citrus limon</i> (L.) Osbeck	Champra	<i>Ushop</i>
17) <i>Citrus reticulata</i> Blanco	Komla	<i>Umang laiharaoba</i> , <i>Luhongba</i>
18) <i>Prunus domestica</i> L.	Heikha	<i>Luhongba</i> , <i>Heijingpot</i> (pre-marriage ceremony of Meitei community)
19) <i>Saccharum officinarum</i> L.	Chungou	Worshipping of <i>Lainingthou</i> god of Meitei community
20) <i>Cynodon dactylon</i> (L.) Pers.	Tingthou	<i>Luhongba</i>
21) <i>Gardenia jasminoides</i> J.Ellis	Kaboklei	<i>Shraddha</i> , <i>Luhongba</i> , worshipping of <i>Lainingthou</i> god
22) <i>Jasminum sambac</i> (L.) Aiton	Malika	<i>Shraddha</i> , <i>Luhongba</i> , worshipping of <i>Lainingthou</i> god

Conservation of animals for rituals or religious purposes is shown in Table 2. In all 7 types of animals were found to be conserved for 10 rituals or religious purposes in all the five villages by both Hindus and Muslims. Idd festival of Islam,

Hakikat (child's naming ceremony in Islam), Marriage ceremony in Islam, *Qurbani* (a ceremony which cows are slaughtered and eaten and is performed exactly after two months and 10 days of Ramadan, the fasting month for

Muslims) and *Govardhan puja* (puja celebrated by Hindus to remember the victory of Lord Krishna over the arrogant

Indra) of Hindu were some of the main rituals or religious ceremonies associated with the conservation of animals.

Table 2: Animals conserved for rituals

Scientific name	Local name	Name of the rituals or religious ceremony
1) <i>Capra aegagrus hircus</i> (Linnaeus)	Hameng	Idd festival of Islam, <i>Hakikat</i> (child's naming ceremony in Islam), Marriage ceremony in Islam, <i>Qurbani</i> (a ceremony in which cows are slaughtered and eaten and is performed exactly after two months and 10 days of Ramadan, the fasting month for Muslims), <i>Durga puja</i> (puja of goddess Durga)
2) <i>Bos indicus</i> Linnaeus	Sun	Idd festival of Islam, Marriage ceremony in Islam, <i>Qurbani</i> , <i>Hakikat</i> , <i>Govardhan puja</i> (puja celebrated by Hindus to remember the victory of Lord Krishna over the arrogant Indra).
3) <i>Gallus gallus domesticus</i> (Linnaeus)	Yen	Idd festival of Islam, marriage ceremony in Islam
4) <i>Anas platyrhynchos</i> Linnaeus	Nganu	Idd festival of Islam, marriage ceremony in Islam
5) <i>Channa orientalis</i> Bloch & Schneider	Meeitei Ngamu	<i>Luhongba</i> , <i>Cheiraoba</i> festival (Manipuri new year day), <i>Lamta thangja</i> (worshipping of evil spirits by Meitei community on the first Saturday of the month of <i>Lamda</i> i.e. March).
6) <i>Bubalus bubalis</i> (Linnaeus)	Eroi	Ghee of white coloured buffaloes is used in puja of Lord Shiva, <i>Govardhan puja</i> of Hindu and Idd festival of Islam.
7) <i>Ovis aries</i> Linnaeus	Yao	Idd festival, <i>Hakikat</i> , <i>Qurbani</i> .

Discussion

The study revealed that the community under study has thorough knowledge about the utilisation of both plants and animals bioresources for rituals or cultural life of the people. Ahirwar (2013) ^[1] found that 51 plant species of angiosperms were used by the people in various social and religious customs like marriage, worshipping, child birth, festivals and cremation in Bundelkhand region of India. Sharma *et al.* (2012) ^[11] also found that the Hajong people used many medicinal plants in different rituals. Similar type of study was conducted by Brahma *et al.* (2014) ^[2] which documented 48 plant species from 36 families associated with the socio-cultural and religious beliefs among the Bodo tribe of Bodoland Territorial Council (BTC). Sharma and Joshi (2010) ^[12] also observed 19 plant species which have high utility and importance in religious activities as well as traditional healing system by the local people of Almora district of Uttarakhand, India. Teronpi *et al.* (2012) ^[17] noted that fish is symbolically used in all the rituals of household deities as a customary practice by the Karbis tribes of Assam, Northeast India. During *chojun* ritual, the supreme deity of Karbi pantheon *Arnab Kethe* (also popularly referred as *Barihe*, *Abinong*, *Angsong Asor* etc.) is offered *ok-kereng* or live fish namely *nune* (*Amblypharyngodon mola*, *Danio aequipinnatus*) and *ok-langso* (*Channa gachua*) along with *chehe* (*Carcinus* sp.) and *kumphi* (*Dytiscus marginalis*). In the present study also species of fish such as *Channa orientalis* is used for rituals like *Luhongba*, *Cheiraoba* and *Lamta thangja*.

In the present study communities have also got good understanding of the degradation of the bioresources they used in their rituals due to various reasons like deforestation, lack of awareness, eroding of traditional ecological knowledge, lack of conservation and management etc. Therefore the communities themselves have been conserving these bioresources for a long time. The used of bioresources and their conservation for cultural purposes further highlight that plants and animals are not only important for the survival of mankind and for healthy environment but also they have been incorporated into our sense of place and enshrined in long-standing cultural practices.

Conclusion

Communities living in the five study villages i.e. Nongmaikhong, Phoubakchao, Laphupat Tera, Karang and Ithing uses 22 species of plants and 7 species of animals for various rituals and their cultural life. 22 types of plants were found not killed and conserved for 15 rituals or religious purposes and 7 types of animals for 10 rituals or religious purposes. Conservation of the plants and animals inspite of their degrading status for various rituals shows that the respondents possess high degree of traditional ecological knowledge for conservation. If this knowledge is utilized properly in a scientific manner it will lead to the overall improvement of the surrounding environment. Though the concerned authority (i.e. Loktak Development Authority) is also taking up various conservation activities in and around the Loktak lake they need to be more effective and should develop interest among all the communities to participate in the activities. In this context involving more number of organizations, local communities, organizing more effective conservation related programme may help in the conservation and sustainable management of the Loktak lake and its surrounding environment. Encouraging documentation of the traditional ecological knowledge and revival of the traditional knowledge used by the local communities in conservation of plants and animals in a scientific way so as to conserve the surrounding environment and the Loktak lake for future generations is suggested.

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